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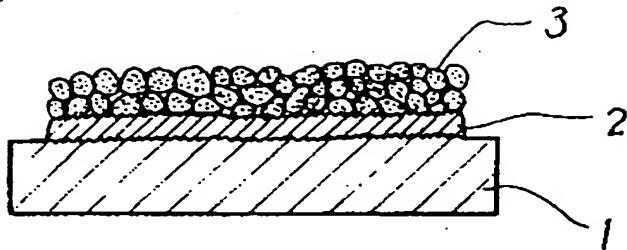
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APPLICANT : HITACHI HEATING APPLIANCE CO LTD;

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TITLE : SELF-CLEANABLE COATING LAYER



ABSTRACT : PURPOSE: To improve various characteristics such as oven workability, and film adhesive strength as well as rate of self-purification by interposing a melt spraying underlying layer of a mixture of a corrosion resistant metal and ceramics between a metallic substrate of an oven and a self-cleanable ceramic layer.

CONSTITUTION: The surface of a substrate 1 of stainless steel, etc., is blasted with grit such as alumina and a mixture of ≥ 1 kinds of Ni-cr, Ni-Al, stainlessss steel and ceramic powder of Al_2O_3 , etc. is deposited to $20\text{--}150\mu$ thickness on the surface of the substrate metal 1 by a plasma melt spraying method or the like, whereby a melt spraying underlying layer 2 is formed. Thence, mixed powders of composite ceramics of $\text{ZrO}_2\text{-SiO}_2$, etc., and oxide having oxidation catalyst effect such as Mn_2O_3 are deposited to about $80\text{--}200\mu$ thicknesses on the layer 2 by a melt spraying method, whereby a self-cleanable ceramic layer 3 is formed. The layer 2 forms a porous intermediate layer having high binding force, thereby improving various characteristics.

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